USDA Foreign Agricultural Service
GAIN Report
Global Agricultural Information Network

Required Report - public distribution

Date: 5/19/2014
GAIN Report Number: 14002

Guatemala

Coffee Annual

Production down 20 percent; could have been worse.

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Report Highlights:

After last year's "coffee leaf rust" impacted harvest, many Guatemalan farmers heavily pruned their trees; some replanted with newer varieties, and most continued periodic fumigations to control the fungus. As a result of those measures, overall coffee production in marketing year 2013/14 (October 2013-September 2014) did not drop as much as had been feared. Post estimates Guatemalan coffee production for MY-2013/14 will drop by about 19 percent compared to 2012/13. Since the recent record crop (in MY-2011/12), Guatemalan arabica coffee production is down by roughly 25 percent. Production is forecast to recover – slightly - during MY 2014/15 depending on preventive measures to control leaf rust fungus and the impact of an El Nino-related dry period late in the crop year.

Executive Summary:

The rust outbreak in Central America (depending on the country/zone/altitude it started in 2011 or 2012) has greatly impacted coffee production across the region. While some countries are reporting incredibly large drops (more than 50 percent), Guatemalan production has "only" dropped by about 25 percent (comparing 2011/12 to current year 2013/14 production).

As a result of the coffee rust crisis, Guatemalan coffee stakeholders have started to address the problem – by heavy pruning, improving crop techniques, expanding use of fumigation and other inputs – as well as analyzing which production areas are viable "as is" and which areas need to be replanted with newer, more rust resistant, varieties.

The technical recommendations provided by the Guatemalan Coffee Association (ANACAFE) Research Unit are supported by coffee scientists worldwide. ANACAFE is urging farmers to resist the temptation of quickly replanting with existing rust resistant or tolerant varieties until it become clearer that those existing varieties produce good-tasting coffee, and are not susceptible to other coffee diseases.

ANACAFE working with the World Coffee Research institute and CATIE (Tropical Crop Institute) are running several multi-variety trials to determine which coffee varieties are most appropriate for different agronomic zones in Guatemala. Unfortunately it will take 5-10 years for those trials to provide useful, and detailed, data.

Overall, the major lessons learned from rust epidemics are:

a) Guatemalan coffee farmers (small, medium, and large) who have learned to manage coffee in an 'intense' and year-round/hands-on manner have not been seriously impacted by coffee rust. Their input costs have risen (fumigation and more pruning).
b). Guatemalan coffee farmers (small, medium or large) who treat coffee as a weed-tree that you can plant and forget until harvest (with poor nutrition, poor tissue management, and lack of pest and disease preventive controls) are going out of business.
c). Coffee producers that grow coffee as an intense crop get better market prices.
d). Coffee producers that are members of cooperatives or associations have responded more effectively to rust epidemics. NGO programs have greatly helped in some limited areas.
e). Agricultural extension service, provided through private or public institutions, is key to maintaining Guatemalan coffee productivity – in the long-term.
f). Appropriate financial tools are needed to ensure the long-term sustainability of the coffee sector which is characterized by very low profits at the farm level.

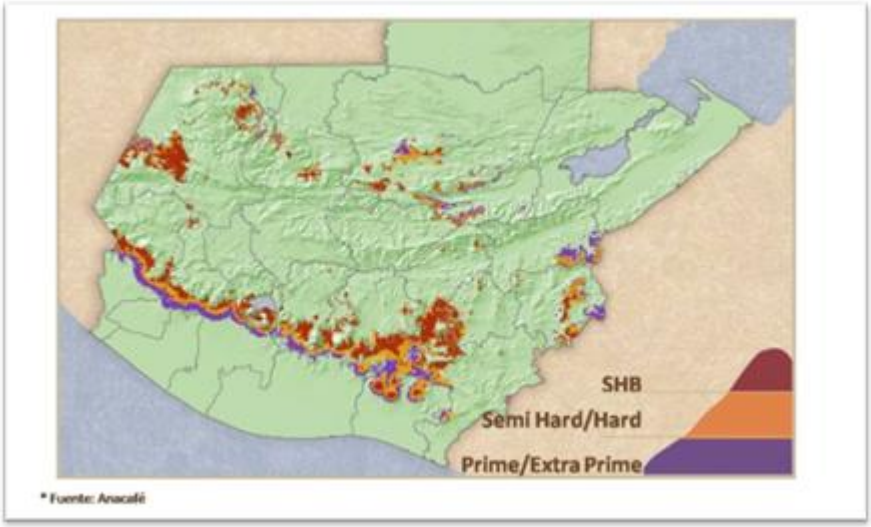
Commodities:

Coffee, Green

Production:

Guatemala's coffee production area for the last 30 years has been relatively steady at 276,000 hectares, which is about 2.5% of the country's total area. Coffee is produced in 61% of the country's municipalities (204 out of 334), reflecting its importance for rural economic growth. ANACAFE estimates there are roughly 90,000 coffee producers, of which 45% are small producers, 47% are medium-sized producers, and 8% are big producers. All Guatemalan coffee, both Arabica (99%) and Robusta (1%), is washed. Coffee considered "prime and extra prime" quality is produced at the 2,500-3,500 feet range, "semi-hard and hard" quality follows at 3,500-4,000 feet; finally, "strictly hard bean" (SHB) coffee is produced above 4,500 feet level, as shown in Fig. 1. SHB coffee is mainly concentrated in the "Guatemalan Coffee Belt" as the Pacific coast region meets the mountains, and in Huehuetenango.

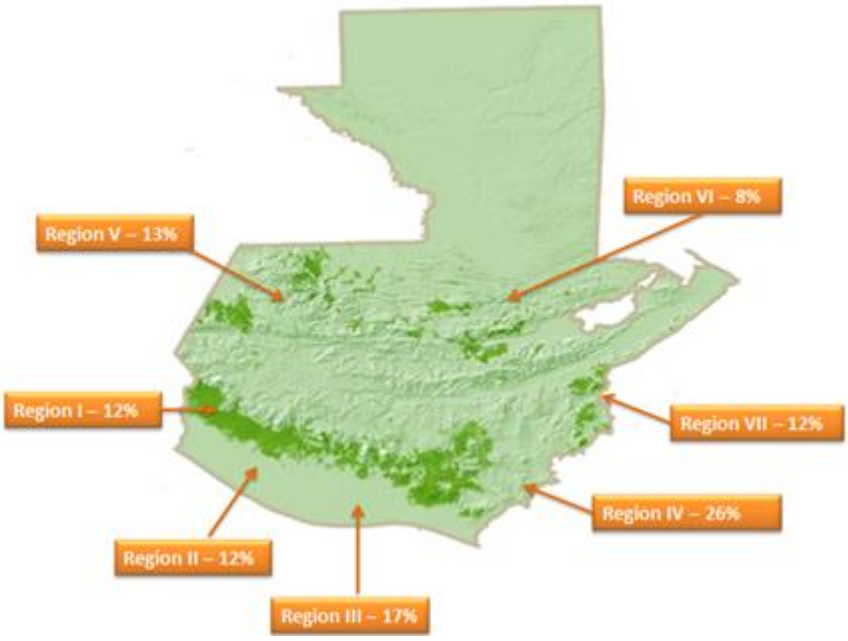
Fig. 1
Coffee producing areas and quality types in Guatemala



Source: ANACAFE

Coffee production in Guatemala has been divided in seven regions, characterized by growing conditions which are reflected in the "cupping" quality (according to "professional tasters", not Post analysts) as shown in Fig. 2. Each region supplies different volumes of the national production, with the "coffee belt" responsible for 67% of the total. Highest yields are estimated at 2 metric tons/hectare (MT/Ha), while lowest yields can reach 0.66 MT/Ha. National average in MY 2011/12 was 1.1 MT/Ha, reduced to 0.83 MT/Ha in MY 2013/14 as a result of the coffee leaf rust outbreak.

Fig. 2
Coffee producing regions and its supply



Source: ANACAFE

Previously, Post estimated MY-2013/14 coffee production at 3.88 million bags; however, our new estimate is 3.40 million bags (as shown in Table 1). Coffee production reached a recent record high in MY-2011/12, when it reached 4.4 million bags. Rust disease initiated in that year (2011 or 2012 depending on the zone), but during MY-2012/13 the disease became an epidemic, dispersing geographically and with higher intensity – and greater impact on the trees.

At first, rust was a minor concern, as most of the trees were able to reach harvest (with only a small decline in production); however in following years the rust outbreak became worse. In response, Guatemala developed a coordinated control strategy at the national level which allowed for increased technology transfer according to the production region (ANACAFE), fumigation brigades (Smallholder Coffee Association for Exports - FEDECOCAGUA), and government support through monitoring, surveillance, and a pesticides subsidy (Ministry of Agriculture - MAGA). In addition to those three major stakeholders, many NGOs (supported by international donors, roasters and coffee buyers) also started or expanded projects supporting Guatemala's coffee producers, focusing on the many smallholder families.

After the previous "coffee leaf rust" impacted harvest, many Guatemalan farmers heavily pruned their trees; some replanted with newer varieties, and most continued periodic fumigations to control the fungus. About 10% of the planted area was heavily pruned, and about 2% was replanted. As a result of those corrective/preventive measures to combat rust, overall coffee production in marketing year 2013/14 (October 2013-September 2014) did not drop as much as had been feared. Post estimates Guatemalan coffee production for MY-2013/14 will drop by about 19 percent compared to 2012/13.

Since the recent record crop (in MY-2011/12), Guatemalan Arabica production is down by roughly 25 percent.

Regions III and IV have experienced the biggest pruning, while region VII has gone through most of the renovation.

Table 1
PS&D for Guatemalan Coffee

Coffee, Green Guatemala	2012/2013		2013/2014		2014/2015	
	Market Year Begin: Oct 2012		Market Year Begin: Oct 2013		Market Year Begin: Oct 2014	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	0	280	0	276		276
Area Harvested	0	276	0	246		246
Bearing Trees	0	912	0	1,089		1,090
Non-Bearing Trees	0	60	0	131		130
Total Tree Population	0	972	0	1,220		1,220
Beginning Stocks	332	332	442	311		198
Arabica Production	4,200	4,200	3,875	3,404		3,600
Robusta Production	10	10	10	15		15
Other Production	0	0	0	0		0
Total Production	4,210	4,210	3,885	3,419		3,615
Bean Imports	0	1	0	1		1
Roast & Ground Imports	0	2	0	2		2
Soluble Imports	200	176	210	175		174
Total Imports	200	179	210	178		177
Total Supply	4,742	4,721	4,537	3,908		3,990
Bean Exports	3,780	3,800	3,450	3,100		3,300
Rst-Grnd Exp.	0	0	0	0		0
Soluble Exports	20	10	50	10		10
Total Exports	3,800	3,810	3,500	3,110		3,310
Rst,Ground Dom. Consum	300	400	400	400		400
Soluble Dom. Cons.	200	200	200	200		200
Domestic Use	500	600	600	600		600
Ending Stocks	442	311	437	198		80
Total Distribution	4,742	4,721	4,537	3,908		3,990
1000 HA, MILLION TREES, 1000 60 KG BAGS						

After 30 years a fairly constant planted area of 280,000 Ha, of which 99% is normally harvested, as of MY 2013/14, coffee area planted has slightly declined to 276,000 Ha, of which 89% is currently being harvested (246,000 Ha). About 43,000 Ha were seriously affected by rust, although a much larger area had some signs of rust on the coffee trees.

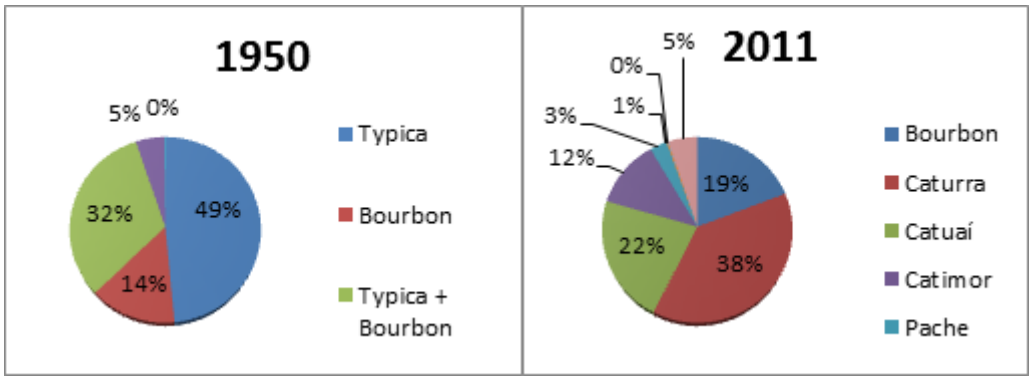
Coffee productive cycle is estimated in 50 years, and 60% of Guatemalan coffee trees are less than 25 years old. The proportion of "Arabica" to "Robusta" trees has kept almost constant at 99.6% Arabica and 0.40% Robusta. Robusta increased during MY 2013/14 from 10,000 trees to 15,000 trees. Robusta (as a sturdier tree) is used for renovation on lower altitudes, and as a rootstock for grafting purposes.

Most renovation taking place at less than 3,500 feet comprises Robusta ANACAFE and NEMAYA variety (resistant to nematodes). Nestle recently donated 1.5 million trees of Sarchimor hybrid for those municipalities where small farms were highly impacted by coffee rust.

Back in the 1950s, 49% of the production area was planted with "Typica" variety, followed by a mix of "Typica" and "Bourbon". These varieties were planted in altitudes up to 3,500 feet. As a result of coffee prices crises of the 1990's, lower altitude lands (previously planted with coffee) were better suited for more profitable crops, such as cotton and sugar (and now palm oil). Most of the coffee production migrated to higher altitudes, transforming Guatemalan coffee production into hard coffees instead or prime ones, accounting now for 70% of the production being hard coffees. The main coffee varieties are by "Caturra" variety (38%), followed by "Catuaí" (22%), "Bourbon" (19%), and "Catimor" (12%), as shown in Fig. 3.

Fig. 3

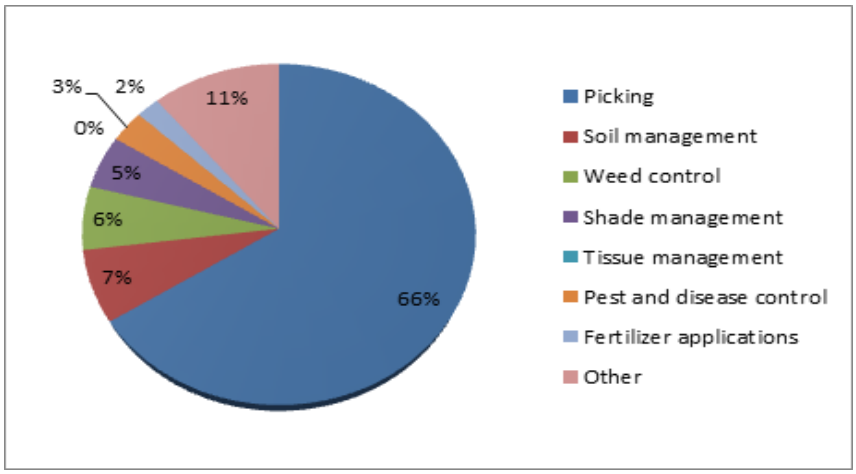
Comparative Analysis of Coffee Varieties Grown in Guatemala (1950 vs. 2011)



Source: ANACAFE

Rust is present in all regions, but its impact has varied widely. Rust impact is a combination of economics and agronomics. Coffee production cost disaggregates into hand labor (70%) and inputs (30%). Hand labor structure is shown in Fig. 4. Roughly 66% of the hand labor cost goes for picking, followed by soil management, weed control and shade management. Most coffee producers, independently of their size (small, medium, or big), had not recognized pest and disease control, combined with tissue management, as critical for coffee production sustainability -- prior to the recent coffee rust outbreak.

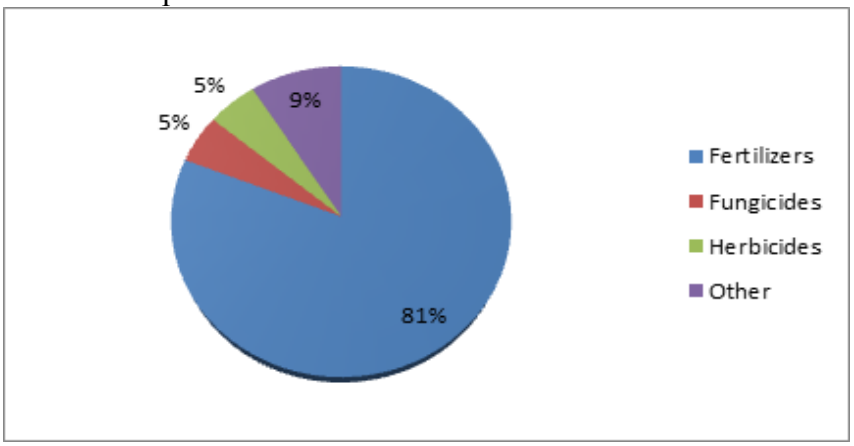
Fig. 4
Coffee Production Costs in Guatemala



Source: ANACAFE

Inputs structure, as shown in Fig. 5, clearly demonstrates that fertilization applications are widely recognized as major and important production costs (81% of total costs), while fungicide and herbicide applications barely represent both 10% of input costs. When coffee prices are low, cutting inputs is the first option coffee producers have to adjust production costs, as gains apparent to be (in the short-run) fairly marginal. Prices paid to farmers range in between $2.30-2.80/Kg while coffee production costs are presently estimated at $1.80/Kg, representing a very small portion of the final price paid by U.S. consumers at retail ($22/Kg or way more).

Fig. 5
Inputs' Cost Structure in Guatemalan Coffee



Source: ANACAFE

Coffee leaf rust is harder to control in the lowlands, where humidity and higher temperature increases the severity of the disease. These areas (under 2,500 feet) are the ones subject to renovation/replanting for both agronomical and economic reasons, as chemical control increases significantly the inputs cost.

On the other hand, rust resistant/tolerant varieties experience other diseases, which may be harder to control at higher altitudes.

With proper adequate tissue management, coffee rust is not as nearly devastating as what has been reported. In Photograph 1, there is clear evidence of a farm poorly managed versus one properly managed on the other side of the road. Both farms belong to big producers in Huehuetenango, at exactly the same altitude and weather conditions. Cultural management of the plant tissue, together with adequate nutrition and preventive spraying during the vegetative and flowering phases, leads to a good coffee harvest (even in the presence of leaf rust)..

Photograph 1

Side-by side two big-producer coffee plantations; one heavily infested with rust (left to the road – light green color reflects defoliation; only the tree trunk remains; no coffee production) and the other healthy (right to the road – deep green color demonstrates good leaf coverage and good coffee production), as a result of cropping practices, nutrients, and pest/disease management. A FAS coffee analyst is standing in the field of heavily infested trees. (Huehuetenango, 5,000-7,000 feet, March 2014).

Source: USDA/FAS/Guatemala

Overall, the major lessons learned from rust epidemics are:

a) Guatemalan coffee farmers (small, medium, and large) who have learned to manage coffee in an 'intense' and year-round/hands-on manner have not been seriously impacted by coffee rust. Their input costs have risen (fumigation and more pruning).
b). Guatemalan coffee farmers (small, medium or large) who treat coffee as a weed-tree that you can plant and forget until harvest (with poor nutrition, poor tissue management, and lack of pest and disease preventive controls) are going out of business.
c) Coffee producers that grow coffee as an intense crop get better market prices.
d) Coffee producers that are members of cooperatives or associations have responded more effectively to rust epidemics. NGO programs have greatly helped in some areas.
e) Agricultural extensions service, provided through private or public institutions, is key to maintaining Guatemalan coffee productivity – in the long-term.
f) Appropriate financial tools are needed to ensure the long-term sustainability of the coffee sector which is characterized by very low profits at the farm level.

In response to the Central American rust epidemics, USAID is supporting an "Emergency Rust Coordinator", hosted at PROMECAFE (Regional Association for Technical Coffee Training – associated with IICA – Inter-America Institute for Cooperation in Agriculture, and the national coffee associations of Central America). The Coordinator works closely with the Central American Agricultural Ministers (CAC) and all the national, regional and international groups trying to address the coffee rust outbreak.

Several on-going efforts to establish an early warning system for rust have brought together NGOs and international organizations such as FAO. The early warning system at the regional level is being designed, but its applicability will depend on each Central American country's buy-in, as it requires considerable input on establishing adequate weather stations and rust monitoring, together with data uploading into the system, to create a more precise and trust worthy rust prediction model. Central America will design its coffee rust warning system based on the already validated wheat rust model in Mexico. At present, USAID has supported Guatemala with 65 weather stations to support the overall effort. The warning system is intended to provide, on a real-time basis, recommendations for coffee producers' business decisions and food security challenges.

Coffee production, in general, generates close to 150,000 full-time and 300,000 part-time jobs in Guatemala. Coffee is one of Guatemala's major contributors to the agricultural GDP, representing US$775 million during CY 2013, roughly 1.5% of total GDP. Rust epidemics have significantly impacted food security in Guatemala, given that 65,000 producers are small and coffee represents their main source of income. Few agricultural options are available for coffee substitution at high altitudes, where 70% of the production is concentrated.

Coffee is an interesting agroforestry model. Given that coffee is grown under shade, coffee agroforestry system in Guatemala is an environmentally suitable crop. Some of the coffee shade might also generate economic benefits, as does "black pepper", but coffee is a great resource for the highlands and steep areas, where aside from coffee only forests can grow (see Photograph 2). Coffee is an important economic option for rural families in Guatemala, and it reduces soil erosion compared to other crops grown on steep hills such as corn.

Photograph 2

Coffee Production in the Guatemalan Highlands

Source: ANACAFE

Consumption:

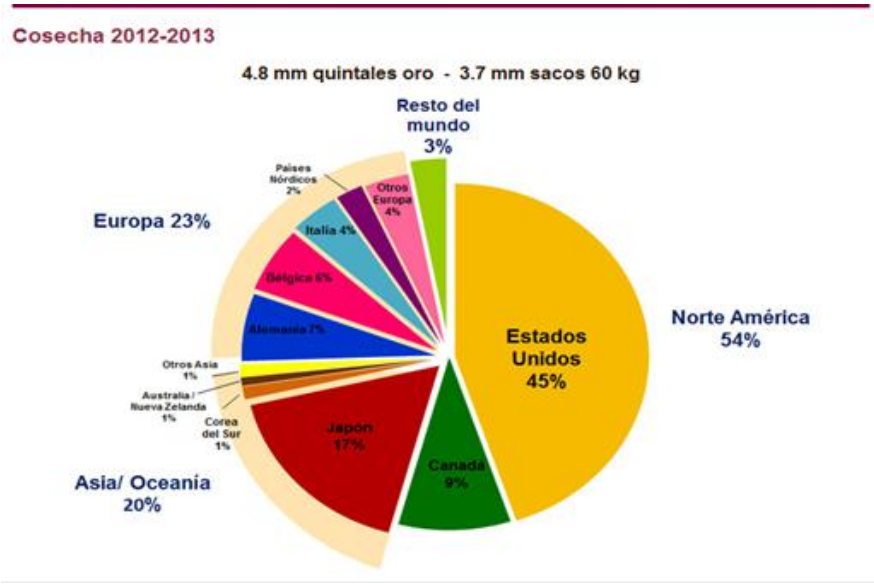
Coffee consumption in Guatemala is estimated in 600,000 bags (60 Kg), 70% of which is roasted and ground; mainly for local consumption. Guatemala has 16,188 wet coffee mills and 29 roasters. Coffee per capita consumption in Guatemala is presently 2.4 Kg per person, which is 46% above world average of 1.3 Kg per person. Specialty coffee in Guatemala is highly appreciated, and presently there are at least seven big gourmet coffee chains in Guatemala, such as: &Café, Café Gitano, El Cafetalito, Barista, McCafé, and Starbucks. At least the first three chains are present at both colleges and universities as in main commercial areas (including malls). New generations are gaining an appreciation for high-end coffee, significantly increasing its demand.

Trade:

Exports for MY 2014/2015 are forecast at 3.31 million bags (60 Kg), a slight recovery from previous estimate for MY 2013/2014 (3.10 million bags – 60 Kg). Green coffee continues to be the preferred exports product, though some trials with roasted coffee are being tried.

Guatemala's main export markets have been the United States, Japan, Canada, Germany and other EU Countries. During MY 2012/2013 exports to the U.S. represented 45% of total exports, followed by Japan (17%), Canada (9%), the European Union (23%), and Asia/Oceania (20%), as shown in Fig. 6.

Fig. 6
MY2012/2013 Exports Markets for Guatemalan Coffee



Source: ANACAFE

Table 2 shows volumes of green coffee exported during the 2012/2013 harvest. U.S. continues to have the major share, while Japan and Canada are slightly increasing their share. The EU and the rest of the world dropped their share during last MY. New emerging markets are: Australia, Taiwan, and South Korea.

Table 2
Guatemalan Coffee Export Trade Matrix

Export Trade Matrix		
Country	Guatemala	
Commodity	Coffee, Green	60 Kg bags
Time period	MY	(1000's)
Exports for:	2011/2012	2012/2013
U.S.	1,719	1,693
Others		
Japan	504	641
Canada	290	349
Germany	316	235
Other EU Countries	643	578
Total for Others*	1,753	1,803
Others not Listed	339	257
Grand Total	3,811	3,753
*Total others is Other than U.S.		

Source: Global Trade Atlas

Imports have kept relatively constant at 178,000 bags (60 Kg), corresponding to soluble coffee, mainly sourced by Mexico, Colombia, Nicaragua, Costa Rica, and Brazil.

Stocks:

Stocks dropped from 311,000 bags (60 Kg) during MY 2012/2013 to 198,000 bags (60 Kg) on MY 2013/2014. The expected trend is to reach 80,000 bags (60 Kg) during MY 2014/2015, to maintain exports as high as possible. Stocks are forecast to recover after 2015.

Policy:

Legislative Decree 19-69 created the Coffee Law in Guatemala in 1969, and Presidential Decree 13-70 regulates it. ANACAFE is responsible for advising the Government of Guatemala on coffee matters, and establishing the coffee policy for production and commercialization purposes. ANACAFE is mandated to provide technical services that include research, trials, demonstration, assistance, and outreach. Overall, the Coffee Association must promote economic and agricultural activities related to coffee, including crop diversification. Other services that ANACAFE must provide: cupping, arbitrage, registration, statistics, warehouses, and other auxiliary services.

In addition, ANACAFE must propose financial solutions for the milling and commercialization of coffee, mainly attending the small producers. ANACAFE is also responsible for issuing the export and shipment permits. ANACAFE sets minimum prices and supervises overall sales activities, including quality. ANACAFE is financed through an export tax, which imposes a Q 0.25 fee for every hundred-weight of green bean exported (equivalent to US$0.08/60 Kg bag). The export tax is collected through the Government of Guatemala Customs Authority, and transferred via Bank of Guatemala to ANACAFE.

Legislative Decree 37-72 and 74-72 provide amendments to the Coffee Law, the first establishing tax exemption to buy fertilizers and equipment and the second defining a 2 year term for the President and Vice president of ANACAFE.

Through Legislative Decree 11-2013, issued in January 2013, Government of Guatemala declares rust epidemics as a phytosanitary emergency. This decree allows ANACAFE and MAGA to effectively coordinate a coherent response at the national level, and assigns MAGA the mandate to support non registered coffee producers (usually small coffee farmers that are not familiar with ANACAFE).

Legislative Decree 12-2013 expands the Guatemalan Coffee Trust Fund (created in 2001 and later modified in 2005), for another 10 year period (which ends by 2026), to support measures addressing the coffee rust outbreak. The trust fund provides for: a) non reimbursable funds for assistance to coffee production for inputs and productive processes, b) low interest loans for coffee producers, set on 2% annual rate for small ones and 3% for medium and big producers, and c) public transfers of financial resources to the trust fund, to increase it up to $100 million. The Ministry of Agriculture is responsible for the supervision of the trust fund, and the Rural Development Bank (BANRURAL) is tasked with its administration.

Marketing:

ANACAFE, and FEDECOCAGUA, provide technical assistance (to farmers and associations interested in export certs) to support for the following certifications: Rainforest Alliance, GLOBAL GAP, Utz

Certified Good Inside, Organic Coffee (IFOAM), Café Bird Friendly, Fair Trade, Private Standards for Nespresso, Naturaland, Bio Suisse, and Demeter.

ANACAFE has established its Coffee School, where baristas, chefs, and any person, group, or association can learn how to prepare gourmet coffees. ANACAFE is also responsible for Guatemala's participation at the Cup of Coffee auction. ANACAFE publishes "El Cafetal", a three times a year selective coffee magazine, with latest news related to the coffee sector, from technical information up to health studies associated with drinking coffee.

ANACAFE has pioneered a marketing effort to define Guatemala's coffee producing regions based on coffee characteristics, defined by geography and climate, reflecting in an exclusive cup profile. Eight distinctive regions of strictly hard bean quality coffees have been identified, which are promoted as Guatemala's regional coffees, as shown in Fig. 8. Antigua Coffee already has a Geographical Indication protection, and there is a defined interest to protect the rest of the regional coffees. For more information on each regional coffee description and characteristics, you can visit: http://www.guatemalancoffees.com/index.php/our-coffee/8-coffee-regions/highland-huehue.

Fig. 8
Guatemala's Regional Coffees

Source: ANACAFE

As a complimentary research activity, Del Valle University has carried out a pilot study to differentiate coffee aroma based on its biochemical composition. The study will move to its second phase, given the positive results of the pilot, funded by the Secretariat of Science and Technology in Guatemala. A brief description of the study can be found under the title "Aroma de Café", in the following link: http://www.uvg.edu.gt/investigacion/cib/index.html.

FEDECOCAGUA, the Federation of Guatemalan Coffee Cooperatives, which supports 20,000 coffee producers, mainly small, has also designed a special marketing strategy to increase market prices and opportunities for its associates, which represent 15% of Guatemalan exports. FEDECOCAGUA is the

main institution that deals directly with small coffee producers (1.32 Ha per farmer), and through its 148 cooperatives, has provided small farmers with direct commercialization options.

Aside of providing technical and financial support to its members, FEDECOCAGUA provides milling, storage, classification, the federation exports directly for its members. At present, the qualities that FEDECOCAGUA offers to its associates through its dry dry mill and cupping are: Fancy SHB Cuchumatán, Genuine Antigua Pastorl (GAP), SHB-EP La Delicia, and FSHB-EP Gourmet. FEDECOCAGUA also offers exporting under direct branding of its associates.

Production, Supply and Demand Data Statistics:

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